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| FORM PTO-1390 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371 | | ATTORNEY'S DOCKET NUMBER: BET 01/0527 U.S. APPLN. NO. (If known, see 37 CFR 1.09/869382 |
| INTERNATIONAL APPLICATION NO. PCT/FR99/03304 | INTERNATIONAL FILING DATE: 28 DECEMBER 1999 | PRIORITY DATE CLAIMED: 30 DECEMBER 1998 |
| TITLE OF INVENTION: HEAT-SENSITIVE MEDIUM FOR SEPARATING SPECIES IN A SEPARATING CHANNEL | | |
| APPLICANT(S) FOR DO/EO/US: Jean-Louis VIOVY, Dominique HOURDET, Jan SUDOR | | |

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
 - a. ☒ is transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☐ has been transmitted by the International Bureau. (see attached copy of PCT/IB/308)
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)).
 - a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☐ have been transmitted by the International Bureau.
 - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - d. ☐ have not been made and will not be made.
8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☐ A translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Item 11. to 16. below concern document(s) or information included:

11. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☒ A **FIRST** preliminary amendment.
- ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
14. ☐ A substitute specification.
15. ☐ A change of power of attorney and/or address letter.
16. ☒ Other items or information:

International Search Report
 PCT/IPEA/409
 Abstract of the Disclosure on a Separate Sheet
 Application Data Sheet

| U.S. APPLICATION NO. (if known, see 37 CFR 1.55) 9382 | | INTERNATIONAL APPLICATION NO PCT/FR99/03304 | | ATTORNEY'S DOCKET NO. BET 01/0527 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 17. <input checked="" type="checkbox"/> The following fees are submitted: BASIC NATIONAL FEE (37 CFR 1.492(a)(1)-(5)): Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO \$ 1,000.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO \$ 860.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$ 710.00 International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$ 690.00 International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4) \$ 100.00 ENTER APPROPRIATE BASIC FEE AMOUNT = \$ 860.00 Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(e)). \$ 130.00 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">CLAIMS</th> <th style="width: 15%;">NUMBER FILED</th> <th style="width: 15%;">NUMBER EXTRA</th> <th style="width: 15%;">RATE</th> <th style="width: 15%;">\$</th> <th style="width: 15%;"></th> </tr> </thead> <tbody> <tr> <td>Total claims</td> <td>31 - 20 =</td> <td>11</td> <td>X \$18.00</td> <td>\$ 198.00</td> <td></td> </tr> <tr> <td>Independent claims</td> <td>1 - 3 =</td> <td>0</td> <td>X \$80.00</td> <td>\$</td> <td></td> </tr> <tr> <td colspan="3">MULTIPLE DEPENDENT CLAIMS(S) (if applicable)</td> <td>+ \$270.00</td> <td>\$</td> <td></td> </tr> <tr> <td colspan="4">TOTAL OF ABOVE CALCULATIONS =</td> <td>\$ 1,188.00</td> <td></td> </tr> <tr> <td colspan="4">Reduction of 1/2 for filing by small entity, if applicable. Applicant claims Small Entity Status under 37 CFR 1.27. +</td> <td>\$</td> <td></td> </tr> <tr> <td colspan="4">SUBTOTAL =</td> <td>\$ 1,188.00</td> <td></td> </tr> <tr> <td colspan="4">Processing fee of \$130 for furnishing the English translation later than months from the earliest claimed priority date (37 CFR 1.49(f)).</td> <td>\$</td> <td></td> </tr> <tr> <td colspan="4">TOTAL NATIONAL FEE =</td> <td>\$ 1,188.00</td> <td></td> </tr> <tr> <td colspan="4">Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +</td> <td>\$</td> <td></td> </tr> <tr> <td colspan="4">TOTAL FEES ENCLOSED =</td> <td>\$ 1,188.00</td> <td></td> </tr> <tr> <td colspan="4" rowspan="2"></td> <td>Amount to be refunded:</td> <td></td> </tr> <tr> <td>charged:</td> <td></td> </tr> </tbody> </table> | | | | CLAIMS | NUMBER FILED | NUMBER EXTRA | RATE | \$ | | Total claims | 31 - 20 = | 11 | X \$18.00 | \$ 198.00 | | Independent claims | 1 - 3 = | 0 | X \$80.00 | \$ | | MULTIPLE DEPENDENT CLAIMS(S) (if applicable) | | | + \$270.00 | \$ | | TOTAL OF ABOVE CALCULATIONS = | | | | \$ 1,188.00 | | Reduction of 1/2 for filing by small entity, if applicable. Applicant claims Small Entity Status under 37 CFR 1.27. + | | | | \$ | | SUBTOTAL = | | | | \$ 1,188.00 | | Processing fee of \$130 for furnishing the English translation later than months from the earliest claimed priority date (37 CFR 1.49(f)). | | | | \$ | | TOTAL NATIONAL FEE = | | | | \$ 1,188.00 | | Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property + | | | | \$ | | TOTAL FEES ENCLOSED = | | | | \$ 1,188.00 | | | | | | Amount to be refunded: | | charged: | |
| | | | | CLAIMS | NUMBER FILED | NUMBER EXTRA | RATE | \$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total claims | 31 - 20 = | 11 | X \$18.00 | \$ 198.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Independent claims | 1 - 3 = | 0 | X \$80.00 | \$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MULTIPLE DEPENDENT CLAIMS(S) (if applicable) | | | + \$270.00 | \$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Reduction of 1/2 for filing by small entity, if applicable. Applicant claims Small Entity Status under 37 CFR 1.27. + | | | | \$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | Amount to be refunded: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | charged: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| a. <input checked="" type="checkbox"/> A check in the amount of \$ 1,188.00 to cover the above fees is enclosed. b. <input type="checkbox"/> Please charge my Deposit Account No. 25-0120 in the amount of \$ to cover the above fees. A duplicate copy of this sheet is enclosed. c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required by 37 CFR 1.16 and 1.17, or credit any overpayment to Deposit Account No. 25-0120 . A duplicate copy of this sheet is enclosed. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SEND ALL CORRESPONDENCE TO: Customer No. 000466 YOUNG & THOMPSON 745 South 23rd Street 2nd Floor Arlington, VA 22202 (703) 521-2297 facsimile (703) 685-0573 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | By <u>Benoît Castel</u> Benoît Castel Attorney for Applicants Registration No. 35,041 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

PATENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Jean-Louis VIOVY et al.

Serial No. (unknown)

Filed herewith

HEAT-SENSITIVE MEDIUM FOR
SEPARATING SPECIES IN A
SEPARATING CHANNEL

PRELIMINARY AMENDMENT

Commissioner for Patents

Washington, D.C. 20231

Sir:

Prior to calculation of the filing fee, please
amend the above-identified application as follows:

IN THE CLAIMS:

Cancel claims 1-31.

Add the following new claims:

--32. (new) An heat-sensitive medium for the
separation of species in a separating channel, the said
medium comprising an electrolyte in which at least a set of
block copolymers is dissolved, said block copolymers being
provided in the said electrolyte at a sufficient concentra-
tion to confer on the said medium the ability to reversibly
transit from a viscosity state V1, obtained at a temperature
T1, to a viscosity state V2 which is at least 100% higher